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**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

# Office Action Summary

**Application No.**

10/594,779

**Applicant(s)**

FUJIBAYASHI ET AL.

**Examiner**

MICHAEL DOLLINGER

**Art Unit**

1796

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 03 December 2008.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-20 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SE/US)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_

## **DETAILED ACTION**

### ***Specification***

1. A substitute specification in proper idiomatic English and in compliance with 37 CFR 1.52(a) and (b) is required. The substitute specification filed must be accompanied by a statement that it contains no new matter.

### ***Claim Objections***

2. Claims 9 and 17 are objected to because of the following informalities: The particle size is described in units of millimeters (mm) rather than micrometers ( $\mu\text{m}$ ) as they were in the last set of claims. This appears to be a typographical error so for purposes of examination, Examiner assumes the claims are directed to units of micrometers ( $\mu\text{m}$ ). Appropriate correction is required.

### ***Claim Rejections - 35 USC § 102***

3. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.
4. Claims 1, 2, 5-7, 9-12, 15 and 17-20 are rejected under 35 U.S.C. 102(b) as being anticipated by Ohmori et al. (US 6,177,508 B1) with further evidence provided by Minami (US 5,567,563).
5. Ohmori et al. disclose a polyurethane resin type composition for slush molding and molded article therefrom [column 1 lines 51-54] comprising (A) a thermoplastic polyurethane elastomer [column 1 lines 57-58] which may be a powder with a particle

size preferably 100 to 300 $\mu$ m [column 7 lines 24-27], (B) a plasticizer, (C) a blocked isocyanate [column 1 line 61] such as isocyanurate modified hexamethylene diisocyanate [column 5 lines 52-55], (D) a pigment and (E) 0.5 to 10 parts by weight per 100 parts by weight of (A) of a blocking inhibitor that is a resin powder with a particle diameter of 0.5 to 5  $\mu$ m [column 1 lines 62-65; column 6 lines 20-21] and wherein (E) may be a styrenic and/or acrylic resin are described in Minami [column 6 lines 21-26], discussed below.

6. Minami discloses styrenic and/or (meth)acrylic resins composed of (a) styrenic monomers including styrene [column 4 line 67] and hydroxyl-substituted styrenes [column 5 lines 6-7], (b) (meth)acrylic monomers including methacrylates [column 5 line 22] and hydroxyl-containing methacrylates such as hydroxy methacrylates [column 5 lines 18-19], and (c) other monomers including conjugated dienes [column 5 line 30] such as butadiene [column 5 line 35]. Examiner notes that butadiene reads on the claimed monomer (a02) [see page 12 lines 3-6 of Applicants' disclosure].

7. Regarding claims 1, 5 and 15, Applicants claim the vinyl type copolymer as having a crosslinked structure and preferably crosslinked by a polyisocyanate at hydroxyl, carboxyl, or amino functional group. Examiner takes the position that the hydroxyl functionalized styrenic and/or acrylic resin blocking inhibitor (E) will be at least partially crosslinked by the blocked polyisocyanate (C).

8. Regarding claims 11 and 19, Ohmori et al. disclose the thermoplastic polyurethane powder (A) in powder form made by either a non-aqueous or aqueous dispersion and subsequent drying [column 4 line 59 to column 5 line 4] and the slush

molding composition prepared by mixing the polyurethane powder (A) containing blocked isocyanate (C) with a blend of plasticizer (B) and pigment (D) followed by adding resin (E) to the powder mixture [column 7 lines 12-14]. Since water is not added and the plasticizers (B) are largely hydrophobic [column 5 lines 30-46], this disclosed mixing process reads on "dry blending".

***Claim Rejections - 35 USC § 103***

9. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.
10. Claims 1-6, 9-14 and 17-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kanetani et al (JP 02038453, hereinafter all references are made to the attached translation) in view of Jin et al (US 4,022,849).
11. Kanetani et al disclose thermoplastic polyurethane resin powders suitable for slush molding method [page 10 paragraph 4] with particle size of 1-2000µm [page 10 paragraph 1] and more preferably between 100 and 300µm [page 16 paragraph 2]. The polyurethane resin powder may also include another resin including polyvinyl chloride which may be added in powder form [page 10 paragraph 2]. Kanetani et al also disclose such molded articles as automotive components [page 11 paragraph 1]. The composition may
12. Kanetani et al do not teach the monomers of the vinyl chloride corresponding to the claimed polymer powders (A) and (E).

13. Jin et al disclose fire retardant polyblends comprising thermoplastic polymers intimately admixed with a crosslinked copolymer of vinyl chloride copolymer [abstract]. The fire retardant additives comprise crosslinked copolymers of, *inter alia*, vinyl chloride [2:18], diethylene glycol dimethacrylate [2:26], methyl methacrylate [2:54-55], and ethylenically unsaturated monocarboxylic acids such as acrylic and methacrylic acids [2:59-61]. The particle size of the copolymer particles is in the range of from about 10 to 500 microns [3:50-51]. Jin et al disclose that the fire retardant copolymers may be added to polyurethane resins [5:60-64] and may be admixed with the thermoplastic polymer while each is in the form of a solid powder [6:41-44].
14. It would have been obvious to one having ordinary skill in the art at the time the invention was made to have prepared a powdered resin composition comprising a thermoplastic polyurethane resin powder and a fine particle powder of a vinyl type copolymer because Kanetani et al teach that it is within the skill of the art to prepare a powdered resin composition comprising a thermoplastic polyurethane resin powder and a polyvinyl chloride resin powder and Jin et al teach that it is within the skill of the art to add a vinyl chloride type copolymer to a polyurethane resin powder. One would have been motivated to use the specific vinyl chloride type copolymer of Jin et al in the composition of Kanetani et al because Jin et al teach that it would increase the fire retardancy of the polymer blend. Absent any evidence to the contrary, there would have been a reasonable expectation of success in using the vinyl chloride type copolymer of Jin et al as the polyvinyl chloride powder in the composition of Kanetani et al.

15. Regarding claims 10 and 18, Kanetani et al in view of Jin et al do not explicitly teach a powdered resin composition comprising 0.1% by weight to 5% by weight of vinyl type copolymer to the thermoplastic resin powder (B). However, Jin et al does teach that the amount of crosslinked vinyl halide copolymer which may be admixed with a thermoplastic polymer substrate will depend, primarily, upon such factors as the particular crosslinked vinyl halide copolymer and thermoplastic polymer substrate which are to be blended with one another, the degree of fire retardancy desired in the resulting blend, the degree of clarity, hardness and other specific physical properties which were sought as well as other technical and economic considerations known and understood by those skilled in the art [6:52-62]. Henceforth, Jin et al teach that the amount of crosslinked vinyl halide copolymer added is a result-effective variable. See MPEP § 2144.05 (B). Case law holds that "discovery of an optimum value of a result effective variable in a known process is ordinarily within the skill of the art." See *In re Boesch*, 617 F.2d 272, 205 USPQ 215 (CCPA 1980).

16. In view of this, it would have been obvious to one of ordinary skill in the art to utilize the crosslinked vinyl halide copolymer in a chosen amount, including those within the scope of the present claims, so as to produce desired end results with respect to , the degree of fire retardancy desired in the resulting blend, the degree of clarity, hardness and other specific physical properties.

17. Regarding the limitations toward melting temperatures of the claimed polymers (B), (A) and (E) in claims 1 and 5, these are inherent properties dependent upon the structure of the polymers. Since all the structural limitations of these polymers are

disclosed in Kanetani et al in view of Jin et al, the melting temperatures are held to be inherently disclosed in the polymers of Kanetani et al in view of Jin et al.

18. Claims 8 and 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kanetani et al (JP 02038453, hereinafter all references are made to the attached translation) in view of Jin et al (US 4,022,849) as applied to claims 1 and 5 above, and further in view of Samurkas et al (US 2003/0098114 A1).

19. Kanetani et al in view of Jin et al do not specifically disclose silica fine powder in the powder compositions. However, Kanetani et al do disclose that inorganic fillers and reinforcing materials may be added to the polyurethane resin [page 10 paragraph 3] and one of the fillers added in the inventive examples was titanium dioxide [page 15 paragraph 1].

20. Samurkas et al discloses polyurethane adhesives [abstract]. Samurkas et al teach that reinforcing fillers include titanium dioxide and silica [0016]. Samurkas et al teach, henceforth, that titanium dioxide and silica are functionally equivalent for the purpose of adding to a polyurethane as a reinforcing filler. It is *prima facie* obvious to substitute art-recognized functional equivalents known for the same purpose. See MPEP § 2144.06.

21. It would have been obvious to one having ordinary skill in the art at the time the invention was made to have used silica as a reinforcing inorganic filler in a powder composition comprising a polyurethane resin powder and a vinyl type copolymer because Kanetani et al in view of Jin et al teach that it is within the skill of the art to use



titanium dioxide as a reinforcing inorganic filler in a powder composition comprising a polyurethane resin powder and a vinyl type copolymer and Samurkas et al teach that it is within the skill of the art to use both silica and titanium dioxide in a polyurethane composition. One would have been motivated to have substituted silica for titanium dioxide because Samurkas et al teach that they are functionally equivalent for the purpose of a reinforcing filler in a polyurethane composition. Absent any evidence to the contrary, there would have been a reasonable expectation of success in substituting silica for titanium oxide in the resin powder composition of Kanetani et al in view of Jin et al.

22. Claims 8 and 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ohmori et al. (US 6,177,508 B1) in view of Patnaik (Patnaik, Pradyot (2003). Handbook of Inorganic Chemicals. McGraw-Hill.).

23. Ohmori et al. do not explicitly disclose silica fine powder added in the polymer mixture. However, Ohmori et al. do teach that the pigment (D) may be any known inorganic pigments [column 6 lines 7-9].

24. Patnaik teaches that amorphous silica is used as a pigment [page 826 2<sup>nd</sup> paragraph].

25. It would have been obvious to one having ordinary skill in the art at the time the invention was made to have made a powdered resin composition comprising a polyurethane dispersion, vinyl type copolymer dispersion and a silica powder because Ohmori et al. teach that it is within the skill of the art to produce a slush molding

composition comprising a polyurethane, a styrenic and/or acrylic polymer and an inorganic pigment and Patnaik teach that it is within the skill of the art to add silica as a pigment. One would have been motivated to do this because Ohmori et al. suggest the use of any inorganic pigment known in the art. Absent any evidence to the contrary, there would have been a reasonable expectation of success in using silica as a pigment in the composition of Ohmori et al.

26. Claims 3, 4, 13 and 14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ohmori et al. (US 6,177,508 B1) with further evidence provided by Minami (US 5,567,563) in view of Tanaka et al. (US 4,737,432).

27. The styrenic and/or acrylic resins of Ohmori et al., described in Minami do not disclose monomers of polyhydric alcohol poly(meth)acrylate or ethylene glycol dimethacrylate.

28. Tanaka et al. disclose ordinary binder resins for toners [column 12 lines 33-34] with include styrene-acrylate copolymers [column 12 lines 39-44] and carboxyl functional acrylic copolymers with comonomers including ethylene glycol dimethacrylate [column 13 lines 47-48], methyl acrylate, methyl methacrylate, and many other (meth)acrylate monomers [column 13 lines 34-37]. Most of these monomers are listed as suitable methacrylate monomers of the binder resins of Minami, as discussed above [column 5 lines 13-27 of Minami]. Henceforth, Tanaka et al. teaches that ethylene glycol dimethacrylate is functionally equivalent to the acrylic monomers used in the acrylic resins of Ohmori et al. described in Minami. It is *prima facie* obvious to combine

two compositions each of which is taught by the prior art to be useful for the same purpose, in order to form a third composition to be used for the same purpose. Please see MPEP § 2144.06. Ethylene glycol dimethacrylate also reads on polyhydric alcohol poly(meth)acrylate.

29. It would have been obvious to one having ordinary skill in the art at the time the invention was made to have used methyl methacrylate and ethylene glycol dimethacrylate in the slush molding compositions of Ohmori et al. because Ohmori et al. teach that styrenic and/or acrylic toner binder resins described in Minami et al. are suitable for the blocking inhibitor and Tanaka et al. teach that ethylene glycol dimethacrylate is functionally equivalent to the (meth)acrylate monomers described in Minami et al. used in combination with methyl methacrylate. Absent any evidence to the contrary, there would have been a reasonable expectation of success of forming a blocking inhibitor for the slush molding composition of Ohmori et al. with methyl methacrylate and ethylene glycol dimethacrylate.

30. Claims 1, 3-6, 9, 10, 12-14, 17, 18 and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kinsho et al (US 7,005,480 B2).

31. Kinsho et al disclose a resin particles for use as slush molding resin [column 1 lines 9-10] comprising resin particles (C) having a structure such that a resin particle (A) composed of a resin (a) adheres to the surface of a resin particle (B) composed of a resin (b) [column 2 lines 18-20]. The resin particle (A) has a diameter of 0.01 to 30 $\mu$ m and the resin particle (B) has a diameter of 0.1 to 300 $\mu$ m [column 2 lines 24-26]. The

resin (a) is chosen from a group including vinyl resin [column 2 line 39] and the resin (b) is chosen from a group including polyurethane resin [column 2 lines 51-53]. The resin (a) may be crosslinked [column 12 lines 19-25] and includes monomers such as methyl (meth)acrylate [column 5 lines 23-24], ethylene glycol di(meth)acrylate [column 5 lines 41-42], carboxyl group containing vinyl monomers [column 3 line 34], hydroxyl group containing vinyl monomers [column 4 line 35], and amino group containing vinyl monomers [column 4 line 44]. Kinsho et al also specifically mention styrene-butadiene copolymer [column 5 line 65] and styrene-(meth)acrylic acid copolymer [column 5 line 67 through column 6 line 1] for resin (a). The melting point of resin (b) is generally 0°C to 200°C when used for slush molding [column 19 lines 4-10]. The resin particle (C) comprises 0.1 to 50 weight % of the resin particle (A) and 50 to 99.9 weight % of the resin particle (B) [claim 2].

32. Regarding the range of amount of the disclosed resin particle (A), this range overlaps the claimed ranges of vinyl type copolymers (A) or (E). In the case where the claimed ranges overlap or lie inside ranges disclosed by the prior *a prima facie* case of obviousness exists *In re Wertheim*, 541 F.2d 257, 1911 USPQ 90 (CCPA 1976); *In re Woodruff*, 919 F.2d 1575, 16 USPQ2d 1934 (Fed. Cir. 1990).

33. That the prior art discloses a multitude of effective combinations does not render any particular formulations less obvious, *Merck v. Biocraft*, 10 USPQ2d 1843 (Fed. Cir. 1989).

34. Claims 7 and 15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kinsho et al (US 7,005,480 B2) in view of Hutchinson (US 3,962,370).

35. Kinsho et al, discussed above, do not disclose that the vinyl type polymers (a) are crosslinked by isocyanates. Kinsho et al do disclose that the polymers (a) may be vinyl type copolymers and that these copolymers may be crosslinked in order to improve heat resistance, water resistance, chemical resistance and particle diameter uniformity [column 12 lines 19-23]. Kinsho et al do not discuss the method of crosslinking the polymers (a). Kinsho et al also teach that the vinyl copolymers may contain carboxyl, amine and hydroxyl groups, as discussed above.

36. Hutchinson discloses articles comprising a crosslinked polymeric material [column 1 lines 17-19]. Hutchinson discloses that polymers with hydroxyl, carboxyl and amine groups may be crosslinked by a diisocyanate or a polyisocyanate [column 2 lines 57-66].

37. It would have been obvious to one having ordinary skill in the art at the time the invention was made to have produced a slush molding composition with a polyurethane powder and a vinyl type powder crosslinked with a polyisocyanate because Kinsho et al teach that it is within the skill of the art to prepare a slush molding composition from a polyurethane powder and a powder of a vinyl type polymer with hydroxyl, carboxyl or amine groups that is crosslinked and Hutchinson teaches that it is within the skill of the art to crosslink hydroxyl, carboxyl or amine group containing polymers with an isocyanate. One would have been motivated to use an isocyanate to crosslink the polymer (a) because selection of a known material based on its suitability for its

intended use is *prima facie* obvious, see *Sinclair & Carroll Co. v. Interchemical Corp.*, 325 U.S. 327, 65 USPQ 297 (1945). Absent any evidence to the contrary, there would have been a reasonable expectation of success in using a diisocyanate or polyisocyanate as the crosslinking agent in Kinsho et al.

### ***Response to Amendment***

38. The rejection of claims 5-7 and 15-18 under 35 USC § 102(b) over Sapper et al (US 6,296,903 B1) in the previous Office Action has been obviated by the amendment.

### ***Response to Arguments***

39. Applicant's arguments, see page 8 paragraph 2 through page 9 paragraph 2, filed 03 December 2008, with respect to the rejection(s) of claim(s) 1, 5, 7, 11 and 19 under 35 USC § 102(b) have been fully considered and are persuasive. Therefore, the rejection has been withdrawn.

40. Applicant's arguments filed 03 December 2008 with respect to the 35 USC 102 rejection over Ohmori et al (US 6,177,508 B1) with further evidence provided by Minami (US 5,567,563) have been fully considered but they are not persuasive. Applicant argues that 1) the blocked polyisocyanate of Ohmori et al will not crosslink the blocking inhibitor (E) because the blocking group on the polyisocyanate will not be released until the molding step and 2) a hydroxyl functional blocking inhibitor (E) may not be crosslinked by the polyisocyanate. This argument is not persuasive because 1) even if this is so the composition of Ohmori et al still reads on the claimed composition

comprising a crosslinked structure in the vinyl type copolymer and 2) Applicant has provided no evidence that the blocking inhibitor (E) will not undergo a crosslinking reaction with the polyisocyanate and the reaction between the isocyanate groups and hydroxyl groups will be heavily favored.

41. Applicant's arguments filed 03 December 2008 with respect to the 35 USC 103 rejection over Ohmori et al (US 6,177,508 B1) with further evidence provided by Minami (US 5,567,563) and in view of Patnaik (Patnaik, Pradyot (2003). Handbook of Inorganic Chemicals. McGraw-Hill.) have been fully considered but they are not persuasive. Applicant argues that 1) Ohmori et al does not address the problem of deterioration of the powder flowability and the solution therefor by a powder flowability improver which does not cause die stains and 2) there is no motivation to combine the references of Ohmori et al and Patnaik. This argument is not persuasive because 1) whether this problem is solved by the addition silica is irrelevant to the combination of Ohmori et al and Patnaik, the combination of references only needs to arrive at the claimed invention to address the claim limitations and 2) Examiner has shown that Ohmori et al provides motivation for including an inorganic pigment which Applicant has not addressed. Additionally, Selection of a known material based on its suitability for its intended use is *prima facie* obvious, see *Sinclair & Carroll Co. v. Interchemical Corp.*, 325 U.S. 327, 65 USPQ 297 (1945). The teachings of Patnaik clearly establish silica as a material known and suitable as an inorganic pigment, as required by Ohmori et al.
42. Applicant's arguments filed 03 December 2008 with respect to the 35 USC 103 rejection over Ohmori et al (US 6,177,508 B1) with further evidence provided by Minami

(US 5,567,563) and in view of Tanaka et al (US 4,737,432) have been fully considered but they are not persuasive. Applicant argues that a) the MFT of the toner of Minami et al is low and in the examples the MFT is <160°C, b) the melting temperature of the styrenic and/or (meth)acrylic resins (A2) is probably below 200°C because the Tg of (A2) is 40-85°C while the Tg of resins (A1) is also 40-85°C and the softening point of (A1) is 70-180°C, c) both Minami et al and Tanaka et al have application temperatures in a range such as 80-150°C, and d) the teachings of Minami et al and Tanaka et al are to toner compositions and not slush molding compositions and therefore cannot be combined with Ohmori et al. These arguments are not persuasive because:

- a. The MFT of the toner is merely the minimum fixing temperature and not the melting temperature [column 1 lines 17-20]. Also the MFT values cited in Applicant's arguments are for a toner of a polyester resin (A-i) [column 13 line 2] and other materials [column 13 lines 5-8; Table 1].
- b. The resins (A1) are polyester resins [column 2 line 29] and do not reflect the properties of the styrenic and/or (meth)acrylic resins. The Tg of (A2) alone does not reflect the melting temperature of the resins. Moreover, the disclosed polymers contain all the structural limitations of the claimed polymers, and henceforth should have the same inherent properties as the claimed polymers including melting temperature.
- c. The application temperatures of the toner do not necessarily reflect the melting temperature of the binder resins. Moreover, the above stated argument



with respect to the structural limitations of the disclosed and claimed resins still applies.

d. Minami et al is not combined with Ohmori et al in an obviousness type rejection, rather Ohmori et al specifically lists the resins of Minami et al as suitable for blocking inhibitor (E) in the slush molding compounds [column 6 lines 24-26]. Applicant has not provided any evidence against the combination of Tanaka et al with the Ohmori et al and Minami et al.

***Contact Information***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to MICHAEL DOLLINGER whose telephone number is (571)270-5464. The examiner can normally be reached on Monday - Thursday 7:30AM-6:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Randy Gulakowski can be reached on 571-272-1302. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Randy Gulakowski/  
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/mmd/